RAIL TRANSPORTATION SERVICE PROVIDER ACQUISITION

REVISION 3.2

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1. Introduction

The U.S. Department of Energy (DOE), Office of Environmental Management (EM) has a responsibility to assist DOE program elements on matters related to material transportation and packaging management. To address this responsibility, the current EM organization relies on the Office of Transportation (EM-24), in coordination with the EM Transportation and Packaging Operational Services Group at Albuquerque, New Mexico, to provide specific transportation and packaging products and services for the Department. These resources provide assistance, guidance, and transportation services to ensure the availability of safe, compliant, and efficient transport of DOE materials in commerce.

Towards this end, the EM Transportation and Packaging Operational Services Group at Albuquerque prepared the Rail Transportation Service Provider Acquisition report to provide technical assistance and information on rail service acquisition to the DOE transportation management community. Appendix A captures lessons learned during DOE's Fernald Area Office procurement/management of rail transportation provider services for the Fernald Environmental Management Project. It is apparent that DOE will increase its use of rail transportation services as it continues to clean up its sites as a result of nuclear weapons and weapons components manufacturing, assembly, and testing. The level of expertise within DOE and associated contractors with regard to rail transportation is limited. This document is designed to assist DOE sites and their contractor transportation and procurement staff with rail transportation. This document will deal specifically with the differences between contract carrier and common carrier issues and the pros and cons of each approach. Additional guidance is provided in preparation of rail carrier negotiations.

Implementation of a rail shipment program requires changes in the paradigms of conventional truck-based project planning and acquisition work practices. It cannot be overemphasized that planning for a rail shipment campaign is different, and more involved, than for a highway shipment campaign. As opposed to truck transportation, after track is laid, there is little flexibility for managing infrastructure changes. However, there are a multitude of decisions to be made regarding a rail shipment. For example, bridge conditions relative to the weight of the shipment load and track classification need to be considered. Therefore transportation planning personnel must make every effort to determine project operating and logistics expectations, and to communicate with project operations personnel to verify that sufficient support will be provided by the rail system during project planning and implementation. However, this added effort could result in safer, more cost effective transportation for sites across the DOE complex. Trains offer greater capacity for oversized/overweight material and large volume campaigns, particularly for loads with direct rail service. The use of intermodal containers extends this opportunity to sites lacking rail infrastructure, but with nearby transfer yards.

2. Acquisition Methodology

This document will highlight the different approaches available to the Department for acquiring transportation or related services, with an emphasis on rail transportation. Information on acquisition is found in 41 Code of Federal Regulations (CFR), Subtitle C, Chapter 102, Part 102-117, Transportation Management. These regulations provide four possibilities for procuring a transportation service provider (TSP). The first is to use a General Services Administration (GSA) tender of service. The second option is use another agency's contract or rate tender with a TSP, only if allowed by the terms of that agreement, or if the Administrator of General Services delegates authority to another agency to enter an agreement available to other Executive agencies. A third option is to contract directly with a TSP using the acquisition procedures under the Federal Acquisition Regulation, 48 CFR Chapter 1, Part 1. The fourth option is to negotiate a rate tender under a Federal transportation procurement statute, 49 United States Codes (U.S.C.) 10721 or 13712. These options are not listed in order of preference or priority; however, they do stress that cost effectiveness for the government should be the overriding factor.

Additional information on transportation is found in 41 CFR 109-40, Transportation and Traffic Management. These regulations govern DOE transportation and traffic management activities. Specific information regarding rate tenders to the government is listed.

The terms and conditions in a transportation acquisition document are important elements that serve to protect the Department's interest and to establish the performance and standards expected of the TSP. It should be noted that terms and conditions are: 1) negotiated between the agency and the TSP before movement of any item; and 2) included in all contracts and rate tenders, specifying a listing of services the TSP is offering to perform at the cost presented. Services to be provided typically include, but are not limited to: rates, equipment to be furnished, estimated length of the campaign, and provisions dealing with items such as accessorial charges for detention and demurrage. Further details on terms and conditions are provided in 41 CFR 102-117.65.

The choices for acquiring transportation or related services specify the use of a contract or tender as an acquisition mechanism. Further details of these two methodologies are described in the next two sub-sections.

2.1 Contract Carriage

Acquisition of carrier services by contract provides one mechanism for obtaining specific transportation services, rates, equipment, and other provisions related to specific commodities. There are detailed regulations that identify requirements applicable to the use of contracts, and this type of acquisition generally requires a formal procurement process handled by a Contracting Official.

Federal regulations that address the requirements for the establishment of a contract with a TSP are found in Title 48, CFR, Chapter 1, Federal Acquisition Regulation. Part 47 of this chapter deals specifically with acquiring transportation or transportation-related services by contract.

Only contracting officers may issue contracts to transportation service providers. However, there are requirements for contracting officers to obtain traffic management advice and assistance in dealing with submissions and awards of contracts. When contracts are issued, there are specific protocols that must be followed during implementation and the contracting officer must be in charge of this system. A shipping site must have full contracting capability to ensure this method is used correctly. As stated earlier, transportation management will provide advice and assistance but to the extent allowed by the contracting mechanism.

If a site chooses to use the contract mechanism, specific requirements will have to be addressed by transportation personnel in coordination with the contracting officer prior to a request for proposal being issued. Specifying what is to be shipped, the schedule, and operational services are among the requirements to be addressed. Transportation subject matter experts (SMEs) should also participate on the source selection board to help ensure the transportation service provider selected can best meet all the contractual requirements.

2.2 Common Carriage

Under common carriage, a shipper should theoretically be able to ship under the rail carrier's commercially issued tariff for a specific commodity. The tariff represents standardized pricing, either in general or carrier specific, for a commodity. The use of a tender allows Government shippers the opportunity to negotiate a discount rate in reference to the tariff, or to negotiate service benefits.

The use of tenders is promulgated in 49 USC, Part 10721 (rail) or 13712 (motor). Both these USC sections are titled "Government Traffic." A tender is the mechanism used by transportation service providers to offer the government or its cost reimbursable contractors transportation at a reduced rate. The statute specifically states: "A rail carrier providing transportation or service for the United States Government may transport property or individuals for the United States Government without charge or at a rate reduced from the applicable commercial rate".

Tenders can offer the same results as a contract without going through a formal procurement process. Federal law also requires that "qualified transportation officers" carry out negotiations for a tender. DOE, through Order 460.2, has given permission to DOE Operations and Field Office Traffic Managers and/or their contractor traffic management, as so designated by the DOE Operations or Field Office Traffic Manager, to carry out these negotiations.

There are significant differences between a contract and a tender for acquiring transportation services. The next section of this document will highlight those differences.

3. Contract and Tender Pros and Cons

When acquiring transportation services, contracts and tenders both can be effective, but the responsible transportation manager should be aware of the differences inherent in these acquisition methods. The major differences between these two methods are:

Contracts

- A contract must go through the formal procurement process, which will incur additional administrative costs.
- Both sufficient time and contracting office capability are requirements for this method of acquiring a TSP. A contract can be onerous on terms and conditions, therefore coordination between the contracting office and transportation SMEs is important to the acquisition success.
- A contract can be an advantage if there are recurring shipments between designated places, a definite schedule, and sufficient volumes are involved to obtain favorable rates;
- A contractual arrangement has no recourse with the Surface Transportation Board to resolve issues of cost or market dominance.
- Under a contract, the transportation service provider is only obligated to do what the contract says. Contracts are generally less flexible.

Tenders

- A tender does not have to go through the formal procurement process. Rather, tenders can be directly negotiated with carriers by Department of Energy recognized qualified transportation officers, or designated contractor transportation organizations.
- Tenders are flexible and normally do not "commit" the DOE shipper to any guaranteed shipment activity with the carrier.
- A tender can be an advantage when a shipment must be made within too short a time frame to identify or solicit for a suitable contract;
- Tenders are intended to be there for the DOE shipper, when and if needed.
- A tender is advantageous when recurring shipments are expected, but you do not have sufficient volume to obtain favorable rates. Scheduling is generally more flexible than under a contract;
- Tenders invoke all the common carrier obligations and responsibilities under the Interstate Commerce Act.
- A tender arrangement has recourse with the Surface Transportation Board to resolve issues on cost associated with services provided. This recourse provides a level of protection for shippers as summarized below.

The Surface Transportation Board (STB) was established on January 1996 pursuant to the ICC Termination Act of 1995. The ICCTA eliminated the Interstate Commerce Commission (ICC) and with it, certain regulatory functions that it had administered. The ICCTA transferred to the Board core rail adjudicative, and other functions previously performed by the ICC. As a quasi-judicial body, it makes legal and binding decisions on matters before it. Two such matters for rail transportation can be rate reasonableness and market dominance. The Board has established criteria to test both rate reasonableness and market dominance. It does not have jurisdiction over

a rate reasonableness complaint unless the railroad is shown to have market dominance over the shipper. In order to show market dominance, it must be shown that (1) the revenue to variable cost ratio exceeds 180 percent and (2) no transportation, product or geographic competition exists.

4. Carrier Acquisition Development/Negotiation Considerations

Before acquisition development and negotiations can take place, specific questions must be identified and comparisons made between the modes of transportation that offer service to the site. In order to respond effectively to shipment mode selection questions, you must address infrastructure requirements and accessibility, as well as addressing information about an impending shipment or campaign that includes cargo capacity, shipment time and cost.

One issue to keep in mind when negotiating with rail carriers is that in most cases, one railroad will not service both origin and destination locations, and railroads do not publish "through" rates, unlike motor carriers who publish rates based on zip codes or mileage. Railroads only publish rates for service provided on the lines they own and operate. When negotiating for rail services, two general approaches have been taken. First, is to deal with the origin carrier only. With that case, the origin carrier will in turn contact any other carriers (depending on routing) that will be involved in the transportation process and negotiate with them for charges based on the amount of miles that carrier will handle the cars. The origin carrier will then come back to the site with a through rate based on its negotiations with the other railroad involved.

A second approach, which may offer financial benefits, is to negotiate separately with each rail carrier involved in the overall shipment. For that case, the originating or delivering carrier should not be treated as a "prime contactor", allowing the carrier to negotiate with the other rail carriers and determine the routing. Significant cost savings may be possible, and operational flexibility preserved, if a shipper retains routing (i.e. interchange) options for its shipments. In negotiating with rail carriers it is important to ensure that costs include the responsibility for the carrier to interchange the shipment as needed to provide for a "through" movement of the shipment. This would include any switching carrier effort that is often "buried" in the line haul carrier rate. Use of either tenders or contracts should recognize the need for the line haul carrier to be responsible for making all arrangements for interchanging and switching, and paying the switching carrier. The move at that point becomes a "through" move, even though the DOE shipper has individual rates from each carrier.

Another issue to consider when negotiating with rail carriers concerns interchange points. As the shipper of a rail shipment, one does have the right to designate the interchange points, or handoffs, between originating, intermediate, and delivering rail carriers. Negotiation with rail carriers, whether as a contract or common carrier, should address this issue.

Routing is another important logistical aspect of transportation planning and operations. Program requirements, such as scheduling of shipments, numbers of shipments, and availability of appropriate packaging, can directly affect routing determinations. As an industry practice,

the rail carrier ultimately is responsible for selecting the route. In recent campaigns, DOE has worked closely with the carrier in early identification of potential routes. As a matter of course, DOE consults closely with the carrier and affected states in making the final selection.

Rail routing of radioactive materials is treated differently from highway routing from a regulatory standpoint. Regulations like those for truck shipments do not exist for rail transport, instead a shipper and rail carrier normally plan the route jointly considering such factors as starting and ending points, the shortest distance/time in transit, the number of interchanges, the use of higher class tracks, and other operational considerations.

Finally, the checklist provided in Appendix B identifies generic shipping requirements that can be used to compare against the carrier's service characteristics. This shipping checklist is a tool that can be used by the shipper to prepare for carrier acquisition negotiations.

5. Summary

By DOE Order 460.2, Transportation and Packaging Management, each DOE Operations and/or Field Office is responsible to negotiate with carriers for rates advantageous to the department. As stated earlier, the department may allow the contractor to negotiate with these carriers on their behalf. However, it is imperative that each DOE Office or designated contractor evaluates the most advantageous way to proceed in negotiating with transportation service providers. Considering the pros and cons of using contracts and/or tenders as acquisition methods is vital to obtaining advantageous rates. There are many options available when acquiring transportation or related services, and they should be explored fully in order for DOE to use the mode or individual TSP that provides the overall best value.

Appendix A

Lessons Learned From the Fernald Environmental Management Project

The Fernald Environmental Management Project (FEMP) located at the Fernald Site in Fernald, OH has successfully negotiated a rail tender between the DOE, CSX Railroad and the Union Pacific Railroad in 1999. The terms of the tender provided for unit train movements of radioactive waste materials from the FEMP to Envirocare of Utah, Inc., via DOE-owned gondola railcars. The tender lists' costs associated with the transportation of gondolas railcars having a maximum gross rail weight of 286,000 lbs in 40-, 50-, or 60-car unit trains. The tender afforded significant savings over the cost of truck transportation. Utilizing rail transportation has also contributed to improved efficiency and enhanced overall transportation safety. The site estimates that an approximate total of 125 unit trains will be shipped to the Envirocare site. The site has shipped 64 unit trains (approximately 400,000 tons) by mid-August 2002. The goal is to have one unit train ready every two weeks. Fernald currently has 190 railcars in service. Once the cars are in the possession of the transportation service provider, maintenance and upkeep are the responsibility of the carrier but the cost is still the responsibility of the car owner or leaseholder.

Lessons Learned Concerning Acquisition of Carrier Service

Listed, in bullet format, are some of the lessons learned by Fernald with regard to negotiating with railroads for the tender of service:

- Finalization of the tender with the railroad companies required an extended period of time following negotiation of service. The length of time for signature caused uncertainty, which in turn had an impact on consistency of operations.
- Negotiations with the railroad companies require a well-designed strategy.
- The railroad companies demonstrated a preference to sign a contract not a tender. DOE needs to understand the advantages and disadvantages of each type of acquisition method and pursue the acquisition accordingly. Certainly, with a contract, the railroads do not have to worry about recourse with the Surface Transportation Board.
- Fuel surcharge was a big issue in this round of negotiations. Due to the attacks of 9-11, fuel prices are foremost in the minds of service transportation providers. Both rail and motor carriers are doing their best to negotiate some form of fuel surcharge. Be aware of this in your negotiations.
- The current tender eliminated the 40- and 50-car rate structure and considered a 60-car rate structure. An allowance was made for five 55- to 60-car unit trains per year. This reflected site needs and maintained service flexibility. The lesson learned is to know your service needs during negotiations, which will help eliminate additional service costs later. Tenders should also reflect flexibility for both parties.
- Service level of the connecting carrier returning empty cars has not been as good as it could be. Something to consider that might prove beneficial is to include a clause for connecting carriers' performance.

- Duration of a tender (or contract) is up to each site. This will vary depending on programmatic requirements. However, carriers will most always want to negotiate a shorter-term.
- Allowances for annual rate increases (minimum 4%) beginning each calendar year should be considered carefully. This and the fuel surcharge should be monitored. From the Fernald experience, the carrier should not increase costs more that five percent a year. Most increases have traditionally been in the three to four percent range.
- Negotiation with rail carriers included a discussion on rail security and the potential funding to support additional resources along established routes or rail yards. The second supplement to the rail tender was issued without specific language on funding security measures, but included a clause on "unanticipated cost impacts" that addressed future revision of the tender to reflect this impact if necessary.

Lessons Learned Concerning Bulk Commodities

Most commercial rail tonnage today is bulk cargo. Experience gained by DOE through the Fernald Environmental Management Project's bulk rail shipment program has demonstrated that bulk rail transportation is extremely efficient, cost-effective and safe. A greater in-depth view of this topic is provided below:

Bulk commodities can be transported in one of two ways. The first being containerization and the second being gondolas.

Containers

For sites with and without rail access, intermodal containers can be a viable alternative to standard truck transportation. The cost may be less than over-the road rates; the containers allow for door-to-door shipment and can also be used for temporary storage of material. The containers are transported to the site on flatcars, or flatbed trucks or roll-on/roll-off chassis and are then loaded. They are then picked up and moved to an on- offsite railhead for transport to the disposal facility or transfer yard. Each intermodal container can hold 15 to 19 cubic meters, but will usually exceed weight limit(s) before that capacity is reached. Depending on the material being loaded, experience has shown that 10.5 cubic meters can be loaded and transported legally to the railhead and/or final destination.

Intermodal containers meet the definition of strong-tight packages. Therefore, they meet certain shipping requirements for LSA radioactive materials. If the site is shipping LSA type materials, these intermodal containers may meet all the shipping requirements the site has as well as provide cost and efficiency benefits.

Gondolas

If large volumes of material are being shipped, these containers must be considered provided the shipping and receiving sites are serviced by a railroad. Gondolas are uncovered long cars with low sides, solid floors and usually do not have internal wall braces. These cars are designed for loading or unloading from the top, or dump-unloaded by means of a car rollover unit. Unloading the bulk cargo from the top is time consuming and presents an unacceptable risk of damage to the railcar walls/bottom from the bucket of the unloading equipment. The optimal choice is for the gondolas to be top loaded and unloaded via a rollover unit. One thing to keep in mind is each gondola car has the same load capacity as five truckload shipments. This is something that must be considered to help eliminate risk by reducing the number of shipments and therefore potential accidents.

Most general-purpose gondola cars do not meet all of the specifications for shipments of radioactive materials. Some modifications may need to be made to ensure the safety and security of the material being shipped. They are:

- Wall height should be that, on the basis of the estimated density of the material to be shipped, the cars would be simultaneously weight- and volume-limited with a cargo weight of 210,000 lbs and a tare weight, with cover of about 70,000 lbs.

- After-market, lap-over, fiberglass reinforced plastic covers. These covers:
  - Minimize the infiltration of water during staging and shipment
  - Eliminate any wind borne releases during transportation when used in conjunction with the interior disposable liner
  - Provide security

- "Weep holes" sealed and replaced with drain plugs

- Sprayed-in polyurea liner to:
  - Prevent leakage through car seams in the event that cargo is wet
  - Prevent embedding contamination into railcar steel

- Disposable plastic (.5 mm polyethylene) inner liner to:
  - Reduce gross contamination of the gondola car interior
  - When folded out over the sides during loading, shields car exterior from possible spills

When considering the use of different cars for site clean-up transportation, please check with other sites that have performed the same work. Some site may already be finished or close to being finished and may have rail equipment available for use. Checking with other DOE site locations could save hundreds of thousands of dollars for the Department and site clean-up programs.

Appendix B

The shipping checklist is a tool that can be used by the shipper to prepare for carrier acquisition negotiations. The checklist is useful to help identify shipping requirements in order to compare against the TSP's primary service characteristics.

Shipping Checklist

Ask about	Check
Origin and destination	
Shipper (Consignor) name and address	
Receiver (Consignee) name and address	
Date of shipment	
Customer reference number	
Routing preference	
Description of commodity	
Any unusual size or shapes to consider	
Number of pieces of each commodity	
Weight of each commodity type	
Piece count and total weight of shipment	
Type of packaging to be used	
Average weight	
Density per cubic foot	
Susceptibility to damage	
Special marks or exceptions	
Mode selection	
Carrier selection	
Type of carrier equipment required	
Special services incident to shipment (i.e., rigging, attendants, etc.)	
Estimated volume of this and future shipments	
Billing instructions	
Value of packaged material or released value	
Regularity of shipments	
Other information as needed to accomplish a proper shipment and delivery to consignee	